

## SECTOR 12

### WEST COAST OF AFRICA—THE BANANA ISLANDS TO CAPE PALMAS

**Plan.**—This sector describes the W coast of Africa from the Banana Islands to Cape Palmas. It includes the ports of Monrovia, Buchanan, and Greenville. The descriptive sequence is from the NW to SE.

#### General Remarks

**12.1** The coast lying S of the Sierra Leone Peninsula forms a large bight into the S side of which the Sherbro River enters the sea. An extensive shoal area, known as the Shoals of St. Ann, extends up to 46 miles WNW of Sherbro Island and forms the S side of the approach to the Sherbro River.

Between Sherbro Island and Cape Palmas, 340 miles SE, the coast is intersected by the mouths of numerous rivers. St. Paul, the principal one, enters the sea 85 miles SE of Cape St. Ann (7°34'N., 12°57'W.). The coast is mostly low and sandy, with thick forests inland, rising gradually to wooded mountains.

**Caution.**—Due to the recent hostilities, all vessels are advised to use extreme caution when sailing near the coast of Liberia. Vessels should be aware of any Special Warnings issued concerning the ports within Liberia.

Navigation aids along the coast of Liberia are reported to be unreliable.

Great caution should be observed by vessels navigating along the coast of Liberia, because of the strong prevailing currents. This applies especially at night off the NW part of the coast, which is unlighted. It is prudent to keep in depths of over 35m, at night.

The security of vessels navigating in the waters described by this sector has been reported as a serious problem. The authorities have received numerous reports of vessels having been attacked by gangs of thieves. Generally, these attacks have taken place at outer anchorages, but some have been while vessels were at sea or alongside. Open lights used by the thieves also pose a fire hazard. Mariners are advised to keep a constant watch and not permit any unauthorized craft to come alongside.

Oil exploration installations, facilities, and related vessels may be encountered offshore in the waters described by this sector.

The Economic Community of West African States (ECOWAS) has declared an embargo on arms and military equipment destined for Liberia. Its monitoring group has imposed a maritime exclusion zone of 15 miles along the coast of Liberia. For further information, see Pub. 140, *Sailing Directions* (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

#### The Banana Islands to the Sherbro River

**12.2** **Cape Shilling** (8°10'N., 13°10'W.) and the Banana Islands are described in paragraph 11.45 and paragraph 11.46, respectively.

**Yawri Bay** (8°05'N., 13°00'W.) is entered between Cape Shilling and Shenge Point, 19 miles SE. It is fringed by a wide mud bank which dries in places. The Ribí River, the Bumpe River, and Kagboro Creek enter this bay, but are only accessible by boats.

**Shenge Point** (7°55'N., 12°58'W.), 6m high, is covered in jungle vegetation which may reach a height of 15m. A mission church, with a prominent roof, and a prominent government rest house are situated on the point. The village of Shenge, fronted by a beach, stands 0.5 mile SE of the point.

**Plantain Island** (7°55'N., 13°00'W.), wooded and 40m high, lies 1.8 miles W of Shenge Point to which it is almost connected by a chain of above-water and submerged rocks. Gilmorris Islet, which is conspicuous, and Little Gilmorris Islet, lie 0.2 mile W and 0.2 mile NW, respectively, of the W extremity of Plantain Island. Both of these islets are 24m high and wooded.

Bengal Rocks consists of two reefs which lie 0.5 mile and 2.3 miles W of Plantain Island. The W reef dries 0.9m at its NW end; the E reef dries 2.1m at its NE end. Depths of 2.3m lie about 1 mile WSW of the W reef.

**Cape St. Ann** (7°34'N., 12°57'W.), the W extremity of Sherbro Island, is located 20.3 miles S of Shenge Point and is low and sandy.

The **Turtle Islands** (7°36'N., 13°02'W.) are a group of small tree-covered islands from 18 to 46m high to the tree tops which lie within 10 miles NW of Cape St. Ann.

**12.3** The **Shoals of St. Ann** (7°41'N., 13°10'W.) extend up to 46 miles WNW of Cape St. Ann. These shoals are numerous and are composed of knolls of fine, light brown sand. This sand is apparently the deposits from the several rivers in the vicinity.

**Northwest Patches** (7°58'N., 13°34'W.), the outermost of the shoals, has a depth of 5.5m. A patch, position doubtful, with a depth of 4.5m, lies about 5 miles ENE of Northwest Patches.

**Endeavor Bank** (7°56'N., 13°18'W.), with a least depth of 6.5m on its E side, lies about 21 miles W of Shenge Point.

Shoals of a similar character lie in the area between Northwest Patches and the Turtle Islands.

For a considerable distance to the W and S of the Shoals of St. Ann, the depths are very irregular and a number of banks exist.

**Orontes Bank** (8°05'N., 13°49'W.), the outermost of these banks, has a least depth 15.8m lying about 17 miles NW of Northwest Patches. A shoal bank, with a depth of 18.3m, lies about 7 miles W of the center of Orontes Bank. Another shoal, with a depth of 14.9m, is reported (1963) to lie about 10 miles farther W. Espoir Bank, with a depth of 18.3m, lies about 19 miles S of Northwest Patches.

**Caution.**—During the dry season, the Banana Islands are generally obscured by haze and landmarks cannot be made out. Vessels are therefore advised not to approach any part of the Shoals of St. Ann.

Vessels from Sierra Leone, bound for ports to the S, should give a wide berth to Northwest Patches and keep in depths of over 28m until they reach the latitude of 7°50'N. Vessels may then gradually alter course to the S and SE, but are advised to keep in depths of at least 35m as far as the meridian of Cape St. Ann. The coast then is quite clear and vessels may proceed along it in any navigable depths or at any distance desired.

### The Sherbro River (Bonthe) (7°45'N., 12°58'W.)

World Port Index No. 45867

**12.4** The Sherbro River, which may be more correctly described as a sound or strait, extends about 30 miles in an E direction and then about 10 miles in a S direction to Sherbro Strait (Shebar Entrance). The approach to the river lies between Mes-Meheux Island and the Endeavor Bank. The entrance to the river lies between Shenge Point and Cape St. Ann and is about 20 miles wide. Shoal banks extend from either side of the entrance and the navigable part, which can be used by vessels of moderate draft, is barely 3 miles wide. To the E of the entrance, the width of the channel decreases rapidly.

The ports within the river consist mostly of anchorage roadsteads where vessels are loaded or discharged by barges and lighters.

**Tides—Currents.**—Tides at Falcon Point rise 2.8m at springs and 2.2m at neaps.

The tidal currents in the river attain rates up to 2.8 knots during the dry season, while being greatly accelerated during the rainy season.

**Depths—Limitations.**—The Sherbro River is navigable at all times via Bagru Channel. The largest vessel permitted to enter the river was reported (1980) to be 143m in length with a draft of 7.5m. The channel between Buoy Point, located 20 miles SE of Shenge Point, and the anchorage off the village of Yangisei, 10.5 miles farther SE, may only be entered from 2 hours before to HW by vessels with near this draft. Vessels up to 5.5m draft can reach Bomplake, situated 5 miles above Yangisei, which is the usual roadstead anchorage for larger vessels. Cargo is generally sent out from York, 3 miles SE, and Bonthe, 2.5 miles S, by lighters and barges. Vessels with drafts of less than 5.5m can reach York and can anchor near the NW extremity of York Island. Only small vessels can reach Bonthe (7°32'N., 12°30'W.).

Ore-carrying vessels, which load bauxite and rutile from barges, initially anchor near Buoy No. 8 and load down to a draft of 7.5m; they then shift down river. After completing loading to a draft of 10.9m in the vicinity of Buoy No. 4, they leave the river by a more S track where deeper water has been found.

It was reported (1990) that vessels in the vicinity of Buoy No. 4 could load to a draft of 13m at HW.

**Aspect.**—The N shore of the river is low, undulating, and covered with vegetation. Between Shenge Point, previously described in paragraph 12.2, and Yinkin Point, 3 miles SE, there are several fishing villages and a number of prominent clumps of high trees, but all of these are difficult to identify from seaward.

The shore between Yinkin Point and Buoy Point, 16 miles SE, is wooded. Buoy Point is 18m high and clearly defined. A

conspicuous tree stands in the village of Mano, situated 4 miles SE of Yinkin Point, and a large clump of conspicuous trees is reported to stand 1.5 miles NNE of it.

A conspicuous umbrella-shaped tree stands 2 miles NW of the W entrance point of Thauka Creek (7°48'N., 12°48'W.) and can be identified above the level of the remainder. Numerous groups of fishing stakes are situated on the foreshore between the entrance to Thauka Creek and Buoy Point.

The most conspicuous objects on the N shore include a clump of trees, which contains a 61m high mandu tree, situated 4 miles NW of Buoy Point; and a large dark tree, 48m high and in the shape of a flat dome, standing 1.2 miles NNW of Buoy Point.

The shore from Buoy Point to Falcon Point, 8 miles E, is heavily wooded and fringed with mangroves. A conspicuous tree, 55m high, stands 2.3 miles ENE of Buoy Point.

The S side of the river is formed by Sherbro Island, which is composed of alluvial mud and is low-lying and marshy. This island is mainly overgrown with mangroves and its N coast is marked by several clumps of prominent trees.

Jamaica Point is located 23 miles E of Cape St. Ann and the coast, which extends 1.5 miles NW of it, is backed by tall and dark trees. A conspicuous cotton tree, 37m high, stands in the village of Yangisei, 1.2 miles ESE of the point.

Bobs Island, 46m high, is located 1.2 miles NE of Jamaica Point. Bobs Island Flat, with depths of less than 55m, extends up to 2.5 miles NW of this island.

Long Island and York Island lie 4 miles ESE and 8 miles SE, respectively, of Bobs Island. Yelibana Island lies close NW of York Island. The town of York is situated near the NW extremity of York Island, and the town of Bonthe is situated on the E side of Sherbro Island.

Lighted Buoy No. 1, which marks the outer approaches to the river entrance, is moored 9.5 miles WSW of Shenge Point. The main fairways of the river from its entrance as far as Bobs Island, 50 miles ESE, are marked by lighted buoys and buoys; however, it has been reported that they are often out of position.

Bagru Channel leads between the N shore and Middle Ground. Jenkins Channel, available for small vessels, leads S of Middle Ground.

Bomplake Channel, the continuation of the main channel to the E of Middle Ground, leads between the latter and the W edge of Bobs Island Flat. It then crosses the flat to the W of Bobs Island, leads ESE past the SE extremity of Rendall Island, and continues to York. This channel is tortuous and very constricted between the shoal banks.

The N shore of the river between Shenge Point and Buoy Point is fronted by shallow flats and detached shoals. Depths of less than 5m lie within these flats and extend up to 5 miles from the coast.

The S shore of the river is also fronted by extensive shallow flats, shoals, and rocky patches. A dangerous rock, marked by heavy overfalls during the run of the tide, lies 1.5 miles WSW of Buoy Point and has a least depth of 4.9m. Buoy Rock, with a least depth of 1.8m, lies about 0.5 mile S of Buoy Point. It is very dangerous and is sometimes marked by tide rips.

Middle Ground lies in mid-river between Buoy Point and Falcon Point. This bank dries 1.5m in the N part of its NW section and has numerous drying patches in its SE section.

**Pilotage.**—Pilotage is advisable. Pilots can be obtained at and requested from Freetown. Vessels not wishing to call there must give advance notice and embark a pilot off Cape Sierra Leone.

**Anchorage.**—Anchorage can be obtained wherever convenient in the Sherbro River, with discretion. A good berth lies, in a depth of 11m, off the village of Yangisei.

**Caution.**—Vessels entering the river should employ the services of a pilot or have local knowledge.

Due to the exposed positions and relative infrequency of servicing, the characteristics and positions of the buoys should not be relied upon.

**12.5 Sherbro Strait** (Shebar Entrance) (7°32'N., 12°32'W.), the S entrance to the Sherbro River, is entered between the SE extremity of Sherbro Island, located 28 miles SE of Cape St. Ann and Manna Point, 0.6 mile ESE. Both of these entrance points have long sand spits, on which the sea always breaks, extending from them. In addition, a sand bar lies between the two spits.

It is reported that the opening between the breakers is 200m wide. The bar has a least depth of 4.6m and the channel inside the bar has a depth of 4m. The channel leading across the bar is narrow and bends sharply around the extremity of the E sand spit, making navigation very difficult. As the channel is subject to change, entry should not be attempted without local knowledge. Several wrecks are reported to lie in the vicinity of this entrance.

## Cape St. Ann to Monrovia

**12.6** The S side of Sherbro Island is bordered by a sandy beach and backed by thick woods. The entrance to Sherbro Strait can be identified from seaward as it forms a very visible break in the woods along the coast.

The coast between Manna Point, the E entrance point of Sherbro Strait, and the entrance to the Mano River, 66 miles ESE, is low and sandy. However it is steep-to and free of off-lying dangers, with the exception of two reported shoal patches. A patch, with a depth of 20m, was reported to lie 14 miles offshore, about 23 miles W of the entrance to the Mano River. Another patch, with a depth of 11m, was reported to lie 19 miles offshore, 27 miles WSW of the same entrance.

The entrance to the Kerefe River (Gallinas River), lying about 6 miles NW of the entrance to the Mano River, is reported to be difficult to identify from seaward.

The Mano River is a small obstructed river which is only accessible to surf boats during the dry season. The banks are mostly high without any mangroves. A flagstaff standing at a factory on the N bank of this river is reported to be conspicuous. A prominent clump of trees surmounts a hill, 72m high, which stands 2.5 miles ENE of the mouth of the river and is reported to be the first land seen when approaching from the NW.

The boundary between Sierra Leone and Liberia lies in the vicinity of the Mano River.

**Mano Point** (Manna Point) (6°53'N., 11°27'W.), a slight projection, is low and fringed by above-water and submerged rocks. A rocky spit, with depths of less than 9m, extends up to 0.7 mile WSW of the point and should be given a wide berth.

Cape Mount Bay, formed between Mano Point and Cape Mount, 10 miles SSE, receives the waters of the Sugari River, the Marta River, and Fishermans Lake through a common entrance known as the Cape Mount River in which the surf breaks heavily. The position of this entrance is liable to change due to the shifting nature of the bottom in this vicinity.

**Cape Mount** (6°45'N., 11°23'W.), the S entrance point of Cape Mount Bay, is the W extremity of a large cape also known as Cape Mount. This large cape appears as a large island from a distance and consists of several hills of nearly uniform height. The highest peak, 325m high, stands 2 miles SE of the W extremity. The hillsides are partially cleared and cultivated.

The American mission stands on rising ground, on the N side of the cape, and is conspicuous from seaward. A house, surrounded by pillars, is situated 0.7 mile ENE of the mission. From seaward, this house is conspicuous and appears to stand on the end of a sandspit.

Anchorage can be obtained, in depths of 9 to 11m, good holding ground, about 1.3 miles NNW of the mission.

**12.7 Robertstown** (Robertsport) (6°45'N., 11°22'W.) is situated on the S side of the lagoon which forms the entrance to Fishermans Lake. Two prominent factories stand in the town; a conspicuous radio tower stands close S of them.

Landing is possible in surf boats over the bar of the entrance to the Cape Mount River, but the usual ship's boats can do so only in the calmest weather during the dry season.

**False Cape Mount** (6°42'N., 11°21'W.) is located 3 miles SE of Cape Mount. The coast between consists of a succession of rocky points and small sandy bights. Then, as far as Cape Mesurado, 39 miles SE, the coast is formed by a low continuous beach of light brown sand, backed by thick woods.

The **Loffa River** (6°34'N., 11°04'W.), which enters the sea 20 miles ESE of False Cape Mount, is considerable, but is difficult to access even by surf boats. Half Cape Mount, topped with trees 46m high, stands 0.5 mile N of the river mouth and is a good landmark.

The Po River (Kpo River), which flows into the sea 9 miles SE of the Loffa River, is a small river. Its entrance can be identified by several black rocks lying on a beach at the N side of the mouth.

It is reported that a prominent stranded wreck, which is radar conspicuous, lies about 1.5 miles W of the river entrance.

Between the Po River and the St. Paul River, 10 miles SE, the coast is fringed with rocks, but there are reported to be no off-lying dangers.

The **St. Paul River** (6°22'N., 10°48'W.) is obstructed at its entrance by a shallow bar which is composed of a drying sandspit. This bar extends from End Point, the S entrance point, and curves towards the N shore. Entry over the bar is difficult at all times and during the dry season, it is possible only for surf boats. The river is navigable as far as the first rapids, 12 miles above the mouth. A conspicuous stranded wreck lies on the beach, about 3.5 miles NW of the river mouth. Several prominent radio masts stand 3.7 miles NW of End Point. A prominent hotel is reported to stand 0.5 mile N of the river mouth.

**Cape Mesurado** (6°19'N., 10°49'W.), located 3.6 miles SSW of the mouth of the St. Paul River, is formed by a rocky

steep-to promontory, 80m high. This promontory is high in comparison to the adjacent land and appears as an island when first seen from the W.

A main light is shown from a prominent tower, 6m high, standing on the summit of the cape and is dominated close E by a large and conspicuous hotel. A conspicuous monument stands close SSW of the light. The British Consulate building, with two flagstuffs, stands on the S part of the cape and is very prominent.

## Monrovia (6°21'N., 10°48'W.)

World Port Index No. 45940

**12.8** Monrovia Harbor occupies a large part of Monrovia Bay, which is entered between End Point and Cape Mesurado.

The town of Monrovia is the capital of the Republic of Liberia and stands on the S side of the Mesurado River, close under the high land of Cape Mesurado.

**Winds—Weather.**—The prevailing winds are W to SW. During the dry season, a wind from the N is sometimes experienced for 2 to 3 weeks. The stronger winds are usually experienced during the wet season (April to November). The wind generally rises in the afternoon and early evening and falls off during the night. During the dry season, the wind is usually from the N during the early morning and backs to the SW by late afternoon. Dangerous winds sometimes revolve like squalls of intense force and are usually of very short duration. Heavy rains follow these dangerous winds, which generally come from the land side. Tornados may occur during the seasonal transition months of March/April and October/November.

**Tides—Currents.**—Tides rise 1.3m at springs and 1m at neaps.

The tidal currents at the anchorage set NE on the flood and SW on the ebb. They generally attain maximum rates of 1 knot; however, during July, August, and September, these currents may attain rates up to 3 knots.

It is reported (1993) that a slight eddy exists in the breakwater opening.

**Depth—Limitations.**—The harbor is formed by two converging breakwaters, each about 1 mile long, which extend SW and NW from the shore. The port lies on the W side of Bushrod Island which is separated from the mainland by Stockton Creek. The entrance channel, which leads E and then ESE to a turning basin, is 152m wide and is dredged to a depth of 14.3m. The basin is dredged to depths of 14.3m in its N part and 10.7m in its S part.

The general cargo quay, at the E side of the harbor, is 610m long. It can handle vessels of any length and beam up to 9.1m draft. It is reported (1993) that rubble lying alongside this quay has reduced the depth to 7.3m.

A fishing pier, situated on the inner side of the N breakwater, can handle vessels up to 73m in length and 4.9m draft. It is reported (1994) that a wreck lies close off this pier.

An oil bunkering jetty extends from the S breakwater and can handle vessels up to 213m in length and 9.6m draft.

The BMC Ore Pier, 270m long, can accommodate vessels up to 274m in length, 38m beam, and 13.7m draft at HW.

The crude oil pier consists of dolphins and can handle tankers up to 213m long, with a draft of 12.2m. It has been reported that the berth is heavily silted up and no longer in use.

The NIOC Ore Pier is 274m long. It can accommodate vessels up to 304m in length, 34.7m beam, and 13.7m draft at HW. It is reported (1993) that this facility is closed.

The LMC Ore Pier is 251m long. It can accommodate vessels up to 253m in length, 39.6m beam, and 13.7m draft at HW. It is reported (1993) that this facility is closed.

It is reported (1990) that the largest vessel to enter the port was 120,000 dwt, 267m in length, and 13.7m draft.

The port has a free-zone status and cargo may be stored for transit.

A ship-breaking yard has been established along the shore, about 2 miles N of the harbor.

**Aspect.**—The Mesurado River enters the sea close S of the S breakwater. Its entrance has an uncertain channel which changes both in depths and position due to the W swell. Usually, the bar, which fronts the mouth, has depths of 0.9 to 1.8m. Two prominent road bridges span the river and Stockton Creek flows into it close NE of the E bridge.

A prominent military camp, composed of huts with red roofs, stands on Cape False, 1.5 miles SE of Cape Mesurado. A conspicuous water tower stands 2 miles SSE of End Point.

An Omega radio tower stands 9.5 miles E of Cape Mesurado and can be seen from a distance of 40 miles; it is painted with international orange and white bands and exhibits red and white obstruction lights.

The port installations and oil depot are prominent.

The entrance to the approach channel is marked by Lighted Buoy No. 1 which is moored about 1.2 miles WNW of the harbor entrance. The entrance fairway is indicated by a lighted range and marked by buoys.

**Pilotage.**—Pilotage is compulsory. Pilots can be contacted on VHF channel 9, 12, or 16 and generally board in the vicinity of Lighted Buoy No. 1. It is reported (1993) that pilots may board up to 1 mile W of this position. Vessels should send an ETA at least 12 hours in advance.

Vessels should send an ETA at least 12 hours before arrival. It is reported that bulk carriers of 90,000 dwt and over, as well as loaded tankers will only be berthed during daylight hours.

**Anchorage.**—Anchorage can be taken, in depths of 12 to 16m, in an area, the limits of which are shown on the chart, centered 1 mile WSW of the S breakwater head. The holding ground is good, but vessels roll heavily.

In 1993, it was recommended that this anchorage be used during daylight only, and that at night vessels should remain at least 20 miles off the coast.

**Caution.**—Shoal water was reported (1989) to lie close N of the head of the S breakwater.

It is reported (1993) that the usable channel width between the breakwater heads has been reduced to 76m.

Several wrecks, some stranded, lie in the vicinity of the port and may best be seen on the chart.

Berths and channels within port are liable to silt.

The harbor is sheltered from the trade winds, but not from the SW swell which sometimes causes a heavy scend.

A dangerous wreck is reported to lie about 0.8 mile NW of Cape Mesurado.

A shoal, with a least depth of 10.9m, lies about 3 miles WSW of Cape Mesurado.

It is reported (1994) that disused submarine cables lie close S of the promontory which forms Cape Mesurado.

It is reported that acts of piracy have taken place in the vicinity of the port. See paragraph 12.1 for further information.

## Monrovia to Buchanan

**12.9** The coast between Cape Mesurado and Buchanan, 53 miles ESE, is bordered by a sandy beach and backed by thick brush and trees. The town of Kingsray (King Grays Town) is situated 7.5 miles ESE of Cape Mesurado and two prominent radio masts, marked by obstruction lights, stand on a flat-topped hill, 46m high, 1 mile E of it.

Between Kingsray and the entrance to the Junk River, 20 miles ESE, three prominent summits stand about 3 miles inland from the coast. Crown stands 7.5 miles E of Kingsray and has two summits, the highest one rising to a height of 134m. Coxcomb stands 1.8 miles SE of Crown and has a wooded summit, 61m high. Several lagoons lie between these summits and the coast, and have shallow outlets to the sea.

Hooper Patch, a rock, lies about 3 miles W of the entrance to the Junk River. It has a least depth of 4.6m; the sea breaks on the E part. A narrow passage, with depths of 7.3 to 11m, leads between Hooper Patch and the coast. Several other shoals, with foul ground around them, lie between this rock and the entrance to the Junk River.

The **Junk River** (Farmington River) (6°08'N., 10°22'W.) is only used by surf boats. A tongue of sand, partly dry and partially covered by breakers, extends up to 1.5 miles W from Marshall Point, the N entrance point of the river. The entrance channel leads close around the S end of these breakers and constantly changes. The village of Marshall is situated 1 mile NW of Marshall Point. Within the bar, the depths increase and off the village lie depths of 6m. A large red-roofed warehouse stands on the W side of the village and is prominent. A light is shown from a large shed standing 0.2 mile SE of this warehouse.

The Junk River divides into two branches E of the village; ne leads NW while the other leads E. The branch leading E is reported to be navigable for a distance of 18 miles and has depths of 3 to 9m.

**12.10 Bassa Point** (6°06'N., 10°22'W.), located 1.4 miles SE of the mouth of the Junk River, is dominated by a densely wooded hill, 51m high. This point has sandy beaches on either side and another prominent wooded hill, 82m high, stands 3.5 miles E of it.

A buoy is moored about 1.7 miles WNW of this point.

Vessels can anchor, in depths of 12 to 14m, off the entrance to the Junk River. The usual berth lies over a clear bottom of sand and mud, about 2 miles W of Bassa Point or 0.3 mile W of the above-mentioned buoy.

Saddle Hills, 326m high, stand 11 miles NNE of Bassa Point. They are the NW extremity of a high range of land

which extends 24 miles SE to Mt. St. John. In good weather, the peaks of this range can be seen for 30 miles to seaward.

Between Bassa Point and Long Reef Point, 9 miles SE, several lagoons lie behind the coastal beach. A factory is situated at Middle Bassa, 3 miles NNW of Long Reef Point.

A barrier of reefs fronts Long Reef Point. It commences about 1 mile N of the point and extends, parallel to the coast and up to 0.8 mile from it, for a distance of 4 miles SE. There is foul ground in the vicinity of this barrier and a detached patch, with a depth of 7.8m, lies about 2.3 miles S of the point.

The coast between Long Reef Point and the entrance to the St. John River, 9 miles ESE, is thickly wooded.

Niobe Reef, with depths of less than 1.8m, breaks heavily and extends about 1 mile S from a point, 2.7 miles WNW of the mouth of the St. John River. A rock, which breaks, and another rock, which breaks occasionally, lie about 0.5 mile E and 0.8 mile SE, respectively, of Niobe Reef.

The **St. John River** (5°55'N., 10°04'W.) is of considerable length, but can only be entered through a surfboat channel. The coastline near the entrance changes every season. This river mouth is also a common outlet for two other smaller rivers, the Mechlin River and the Benson River.

**12.11 Grand Bassa Bay** (Waterhouse Bay) (5°54'N., 10°05'W.) is entered between MacDowell Point, the S entrance point of the St. John River, and Grand Bassa Point, 2 miles S. It is encumbered with numerous detached rocks, reefs, and wrecks which may best be seen on the chart.

Grand Bassa Point is composed of sand and highly magnetic rock. A main light is shown from a framework tower, 24m high, standing on the point. A prominent disused light tower, 11m high, stands close N of the light.

Dhuat Rocks, the highest of which is 3.7m high, extend up to 0.3 mile NW of the point. Yellow Will Reef, awash, lies about 0.6 mile NW of the point. A line of detached pinnacle rocks extends NW from Yellow Will Reef and the outermost one, which has a least depth of 4.1m, lies about 2 miles NW of Grand Bassa Point. An obstruction, position approximate, was reported (1956) to lie about 1 mile WNW of the point. Two dangerous wrecks lie about 0.8 mile NNW of Yellow Will Reef.

Harman Rock, awash, lies 0.3 mile NNW of Grand Bassa Point and Snapper Reef, which always breaks, lies about 0.7 mile farther N. Several detached rocks, awash, lie in a line which extends up to 0.5 mile S of this reef; numerous patches, with depths of less than 5m, lie in the vicinity.

**Buchanan Oil Terminal** (5°52'N., 10°04'W.), consisting of several mooring buoys, lies 0.5 mile NNE of Grand Bassa Point. A submarine pipeline extends SSE from the berth to the S shore of the bay. A channel, indicated by a range, leads in a SE direction to the berth. Several oil tanks, a water tank, and some radio masts stand on the shore near the root of the pipeline.

Good anchorage can be obtained, in a depth of 12m, mud, within Bassa Cove which lies immediately N of Yellow Will Reef and 0.7 mile NW of Grand Bassa Point. Small vessels may anchor about 200m nearer the shore.

**Buchanan (5°52'N., 10°04'W.)**

World Port Index No. 45950

**12.12** The port of Buchanan is situated 0.7 mile SE of Grand Bassa Point. The harbor is enclosed by two breakwaters and was constructed for the shipping of iron ore.

**Winds—Weather.**—A constant breeze, accompanied by high humidity, is prevalent throughout most of the year. December and January are drier months. During the months of June, July, and September, the salinity in the harbor basin varies considerably, as these are months of heavy rainfall.

**Tides—Currents.**—Tides rise 1.2m at springs and 1m at neaps.

**Depths—Limitations.**—The central part of the harbor is dredged to a depth of 12.8m. Areas in the SE corner of the harbor and on the inner side of the W breakwater are dredged a depth of 10m.

The concrete ore-loading quay, situated in the NE part of the harbor, is 275m long and has a depth of 14m alongside. Vessels up to 290m in length can be handled. Vessels with drafts up to 11.9m can depart this quay at any time. Vessels with drafts of 12.6 to 12.9m can depart this quay depending upon the height of tide and the required underkeel clearance which is normally 1m.

A tanker berth is 126m long and has a depth of 10.1m alongside. Tankers up to 170m in length can be handled.

The commercial quay, on the inner side of the W breakwater, is 320m long and has a depth of 10.1m alongside. Vessels up to 9.1m draft can be handled.

**Aspect.**—The ore loader, situated 1 mile SE of Grand Bassa Point, is conspicuous.

A patch, with a depth 10.9m, lies about 1.2 miles SW of Grand Bassa Point and is marked by a lighted buoy moored close S. Another patch, with a depth of 10m, lies about 1.5 miles SW of the same point and is marked by a lighted buoy moored close N.

The entrance fairway is indicated by a lighted range which may best be seen on the chart.

The light structures standing at the head of the S and W breakwaters have been reported to be floodlit at night.

**Pilotage.**—Pilotage is compulsory. Pilots may be contacted on VHF channel 13 or 16 and board about 1.5 miles W of the harbor entrance. Pilots are available for ore vessels at any time and for general cargo vessels from 0700 to 2300. Vessels should send an ETA 96 hours, 72 hours, 48 hours, and 24 hours in advance.

**Anchorage.**—Anchorage may be taken, in depths of 18m to 22m, about 1.7 miles W of the S breakwater head. Anchorage may also be taken, in a depth of 16m, about 0.5 mile NW of the S breakwater head and N of the approach range.

**Caution.**—A wavemeter instrument is moored about 1.5 miles SW of the S breakwater head.

Dhuat Rocks, lying N of the port, should not be mistaken for the S breakwater of the port.

Several detached shoal patches lie in the approaches to the harbor and may best be seen on the chart.

**Buchanan to Bafu Bay**

**12.13** The coast between Buchanan and Tobokani Point, located 4.5 miles SE of Grand Bassa Point, is thickly wooded and formed by rocky points and sandy bights.

Tobokani Point, 52m high, is low with a prominent clump of trees standing 0.5 mile NNE of it. Tobokani Rock, 4.3m high, lies near the outer edge of a rocky spit which extends up to 0.7 mile SW of the point. A rock, awash, and a patch, with a depth of 6.4m, lie about 0.5 mile WNW and 0.5 mile SSW, respectively, of Tobokani Rock.

A wreck, with a depth of 8.7m, lies about 2.7 miles SSW of Tobokani Point. A patch, with a depth of 16.4m, was reported (1982) to lie about 1.3 miles WSW of this wreck.

A dangerous sunken rock was reported (1972) to lie about 5 miles S of Tobokani Point.

Between Tobokani Point and Trade Town, 8.2 miles SE, the coast is mainly rocky with sandy bights between the points. A hill, 46m high, stands close within the entrance to the New Cess River, 2.5 miles SE of Tobokani Point. Cliffs, 46m high, front the coast to the SE of this river mouth.

**Trade Town** (5°43'N., 9°55'W.) consists of a large settlement with two prominent factories. A prominent hill, 76m high, stands 2 miles NE of the town. Tobacco Mount, a conical hill, stands 11 miles ENE of the town. It is 274m high and conspicuous from seaward.

Anchorage can be obtained, in a depth of 18m, mud, about 1.2 miles SW of Trade Town.

Trade Town Rock, which always breaks, lies about 0.5 mile offshore, 1.8 miles SSE of Trade Town.

The Little Kulloh River, lying 4.7 miles SE of Trade Town, is only accessible to boats. A hill, 61m high, and Monkey Peak, 47m high, stand 2 miles ESE and 2.5 miles SE, respectively, of the entrance to this river.

Between the Little Kulloh River and the Timbo River, 9 miles SE, the coast becomes lower than that to the NW and is formed by numerous rocky points and sandy bights. Several hills stand behind this featureless stretch of coast. A large black rock, connected to the coast by a reef, lies close off the village of Errick, 4.2 miles NW of the mouth of the Timbo River.

Between the Timbo River and the Cestos River, 12 miles SE, the coast is mostly low, thickly wooded, and is fronted by a sandy beach. Numerous rocks and patches of foul ground lie up to 1 mile off this stretch of coast.

**12.14 Cestos Bay** (5°27'N., 9°37'W.), into which the Cestos River flows, has a low and wooded shore. The depths in this bay are irregular in places and the bottom varies from sand and gravel to dark mud. Vessels passing along the coast are advised to stay in depths of over 25m in order to avoid all the dangers in this vicinity.

Cestos Point, the S entrance point of the bay, is low and bordered by foul ground. Cestos Reef extends up to 0.8 mile SW of the point and consists of rocks, up to 1.8m high, submerged rocks, and drying rocks.

Comber Rock, with a depth of 2.7m, and Schooner Rock, with a depth of 3.7m, lie about 1 mile and 1.3 miles SSW, respectively, of the point.

Spence Rock, which has a least depth of 2.3m and breaks occasionally, and Ship Rock, with a depth of 8.7m, lie 1.1 miles WSW and 1.2 miles W, respectively, of Cestos Point. Greer Rock, a pinnacle with a depth of 7.8m, lies about 1.7 miles WNW of the point.

Cestos Reef and the above-mentioned dangers are all very dangerous as they are steep-to and soundings give no warning of approach.

The Cestos River is entered between St. Georges Point, located 0.6 mile NNE of Cestos Point, and Isaac Point, 0.4 mile NE. It is obstructed by a shallow bar which shifts at times and breaks right across with much swell.

A conspicuous cotton tree stands on St. Georges Point and a radio tower, marked by obstruction lights, is situated close SE of it. Two factories stand in the settlement of the Cess River, close within Isaac Point. A conspicuous clump of trees, up to 54m high, stands 2 miles N of St. Georges Point.

Vessels can obtain anchorage, in a depth of 11m, about 1 mile WNW of St. Georges Point. Local knowledge is advised.

**12.15** The coast between Cestos Point and the entrance to the Sehnkwehn River, 20 miles SE, is formed by a sandy beach which is backed by wooded land. It is intersected in places by several small rivers. Reefs and other dangers extend up to 2.5 miles offshore and vessels should give this stretch of coast a wide berth.

Sunk Rock, with a depth of 4.1m, lies about 1.7 miles offshore, 3 miles SE of Cestos Point. Pobama Rocks, which dry 0.6m, lie about 2.5 miles farther ESE.

**Rock Cess Point** (5°02'N., 9°30'W.) is bordered by Diabolitos Reef which extends up to 1 mile SW of it. Di Rock, 16m high, is the highest of several rocks which lie on this reef. A few small trees stand on its inshore side and it is conspicuous from the N or S as it stands out against the coastal land.

Flat Hill, 101m high, stands 4.7 miles ENE of Rock Cess Point.

A rock, with a depth of 4.6m, lies about 2.5 miles WNW of Rock Cess Point and a rocky patch, with a depth of 3.7m, lies 0.5 mile SE of it. Mutine Rock, a submerged rock, lies about 2.5 miles SSW of Rock Cess Point and breaks in a heavy swell. Several shoal heads, with depths of less than 5m, lie up to 0.5 mile NW and 1 mile NNW of this rock.

Baiya Island (Baiyah Islet), 18m high, lies about 1 mile offshore, 6.7 miles SE of Rock Cess Point. It has a summit, but a few trees stand on the inshore side. Numerous rocks and shoals lie in the vicinity of this island and between the island and the coast. A rock, which breaks occasionally, lies about 1.2 miles SW of the island. Outer Rock, 1.8m high, lies 1 mile S of the island and another rock, 0.3m high, lies close W of it. Both of these rocks are fairly steep-to on their seaward sides.

**12.16 The Sehnkwehn River** (Sangwin River) (5°13'N., 9°21'W.) is entered between Sehnkwehn Point (Sangwin Point) and Wilson Point, 300m SSE. The bar, which fronts the entrance channel, has a depth of 2.4m and can usually be crossed by boats.

Sehnkwehn Point consists of a high, sandy spit and tree-covered prominent hills, 39m high and 49m high, stand 1 mile NW and 0.5 mile N, respectively, of it. A conspicuous clump of trees, 53m high, stands 2.5 mile NW of the river mouth.

A ledge of rocks extends up to 0.4 mile NW of Wilson Point and the entrance channel passes close NW of it.

Vessels can anchor, in depths of 20 to 22m, off the entrance to the river. There is good holding ground of mud and sand about 1.5 miles SW of Wilson Point. Vessels should not approach the entrance to the river within depths of less than 18m due to the irregular bottom.

**12.17 Bafu Bay** (Baffu Bay) (5°10'N., 9°18'W.) is entered between Wilson Point and Bafu Point, 4.5 miles SE. It has a low, sandy shore backed by thickly wooded countryside. The N part of this bay is foul; the Baffni River, which is very shallow, enters the SE part of this bay.

A radio tower, marked by obstruction lights, stands 2.5 miles ESE of Wilson Point.

A conspicuous clump of trees stands on Bafu Point. Submerged rocks, which break during a moderate swell, extend up to 0.5 mile N of Bafu Point. Rocks, 0.3 to 3m high, lie close off the N and W sides of the point. The depths up to 0.3 mile W of Bafu Point are irregular and vessels should avoid this vicinity.

A light is shown from a structure standing 1.7 miles NNE of Bafu Point.

Bafu Rock (Baffu Rock), lying about 2 miles NW of Bafu Point, has a depth of less than 1.8m and is the outermost danger in the N part of the bay.

A bank, with a least depth of 20m, was reported (1921) to lie about 15 miles SW of Bafu Point.

Vessels can obtain anchorage, in a depth of 13m, good holding ground of sand and mud, about 0.8 mile NNW of Bafu Point.

## Bafu Point to Greenville

**12.18** The coast between Bafu Point and Tasu Point (Tassu Point), 6.5 miles ESE, is low and thickly wooded. Numerous rocks lie close offshore and several streams, the mouths of which are obstructed by bars, enter the sea along this stretch of the coast. An islet, 9m high, lies 0.3 mile WNW of Tasu Point.

Say Rock, 4.3m high, lies 2 miles W of Tasu Point and shoal water extends up to about 300m W and N of it.

Tasu Rock, 8m high, lies on the N part of a steep-to reef, 1.5 miles SW of Tasu Point. Rocks, awash, and a submerged rock, lie about 0.4 mile and 0.6 mile NNW, respectively, of Tasu Rock.

Between Tasu Point and Grand Butu Point, 6 miles SE, the coast is covered with large rocks and the land is densely populated. Numerous submerged rocks extend up to 2.3 miles offshore along this stretch of coast.

Keoba Rock, 2.7m high, lies near the middle of a reef, 2.5 miles SSE of Tasu Point. Yule Rock, which dries 0.3m and always breaks, lies about 1.7 miles WSW of Grand Butu Point. Knight Rock, with a least depth of 4m and steep-to, and a submerged rock, lie about 1 mile W and 0.4 mile ENE, respectively, of Yule Rock.

**Grand Butu Point** (5°03'N., 9°08'W.), rocky and steep, is dominated by Grand Butu Hill which stands 1.3 miles E of it. This hill, 87m high, is conspicuous and has three summits.

Except for a few rocks lying close off Grand Butu Point, the coast is low and a clear sandy beach extends for 3 miles ESE to the NW end of Sinoe Bay. Generally, vessels may approach the

coast with safety; however, the depths in the vicinity are irregular and there are occasional patches of rocky ground which necessitate care when anchoring.

**12.19 Sinoe Bay** (Sinu Bay) (5°00'N., 9°03'W.) lies between Grand Butu Point and Blubara Point, 6 miles SE, and has a generally sandy shore. Its approaches are encumbered by numerous dangers and the depths are very irregular. Allen Rocks, Middle Reef, and North Reef lie in the N part of the bay which is mostly foul.

The Sinoe River (Sinu River), which flows into the E side of the bay, can be entered by boats. It is fronted by a narrow bar with a depth of 1.8m.

## Greenville (4°59'N., 9°03'W.)

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**12.20** The port of Greenville is situated in the S part of Sinoe Bay between Blubara Point and North Point, 0.5 mile NNE. The harbor is formed by a breakwater which extends W and then N from Blubara Point.

**Tides—Currents.**—Tides rise 1.4m at springs and 1.1m at neaps.

**Depths—Limitations.**—Berth No. 1, situated along the inner side of the breakwater, is 178m long and has a depth of 8.1m alongside. Generally, vessels up to 156m in length and 7.3m draft can be handled. It is reported (1989) that vessels up to 160m in length have been accommodated.

Berth No. 2, situated along the inner side of the breakwater, is 70m long and has a depth of 5.5m alongside. Coastal tankers up to 62m in length and 4.8m draft can discharge here.

At times, vessels are berthed in a depth of 8.1m within the harbor basin and parallel to the breakwater quay in order to load floating logs.

When there is a heavy swell and it is difficult to berth alongside, vessels sometimes anchor and secure stern-to the breakwater. The holding ground in the harbor basin is good.

**Aspect.**—A sector light is shown from North Point. A main light is shown from a tower, 8m high, standing 0.3 mile NE of South Point. A light is shown from the head of the breakwater. Lighted buoys mark the approach channel. An outer fairway lighted buoy is moored about 2 miles SW of the breakwater head.

A prominent tower, marked by obstruction lights, stands 1.2 miles N of North Point. Two white warehouses stand on the breakwater and are conspicuous.

Santrodeh Hill, 76m high, stands 2 miles E of the port and is the highest of four hills, all of which are easy to identify from seaward.

An obstruction was reported (1988) to lie about 4 miles WSW of the breakwater head.

Gibson Rock, submerged, lies about 3 miles WNW of Blubara Point and breaks in a heavy swell. Kennedy Rocks, a group of shoal heads with a least depth of 4.6m, lies about 2 miles W of Blubara Point. Several shoal patches, with depths of 6 to 9m, lie up to 0.7 mile NE of Kennedy Rocks.

Stevens Rock, with a depth of 5.5m, lies about 1 mile SW of Blubara Point. Several patches, with depths of 6 to 11m, lie between this rock and Kennedy Rocks. Shoal patches, with

depths of 9.1m, lie about 0.5 mile S and 0.5 mile SE of Stevens Rock.

A shoal patch, with a depth of 7.1m, was reported (1963) to lie about 0.8 mile SSW of South Point.

A depth of 6.1m was reported (1971) to lie about 0.4 mile W of the breakwater head.

Numerous depths of less than 5m lie within 100m of the breakwater head.

**Pilotage.**—Pilotage is compulsory. Pilots can be contacted on VHF channel 16 and generally board at the anchorage or in the vicinity of the outer fairway lighted buoy.

**Anchorage.**—Anchorage can be obtained, in depths of 12 to 15m, about 1 mile W of Blubara Point and within an anchorage area which is shown on the chart. Caution is advised as, although the bottom is generally composed of stiff black sand and mud, several small foul patches have been observed within the area. In addition, a patch, with a depth of 7.3m, was reported (1973) to lie in this area.

**Caution.**—The approach to the port is encumbered by numerous dangers and the depths are irregular. During the rainy season, April to November, a heavy swell may occur forcing vessels to anchor in the bay.

A dangerous wreck lies about 0.4 mile WSW of Blubara Point.

## Greenville to the Dru River

**12.21** The coast between Blubara Point and Seta Kru, 12 miles ESE, consists of a low sandy beach which is broken only by Kufuer (Devil Cliff), 2.3 miles ESE of Blubara Point. Kufuer is formed by a prominent rocky projection, 20m high.

Willy Creek runs parallel to the coast and a short distance inland. It connects the Sinoe River with the Plassa River, the mouth of which lies 8.2 miles ESE of Blubara Point. Mount Plassa is a small, round, wooded summit standing 3 miles NE of the entrance to the Plassa River. It is 89m high and stands between two other hills nearly as high.

The E part of the coast between Blubara Point and Seta Kru is fronted by foul ground and dangerous rocks which extend up to 3 miles seaward. The principal outer dangers include a patch, with a depth of 8.7m, lying about 4 miles W of the Plassa River mouth; a patch, with a depth of 9.6m, lying 3.8 miles SW of the river mouth; Kru Rock, a bare and irregularly-shaped mass of stones, which rises to a height of 4.6m about 2.3 miles W of Seta Kru; a patch, with a depth of 6.4m, lying about 0.7 mile W of Kru Rock; and a patch, with a depth of 9.1m, lying about 1.5 miles SW of Seta Kru.

**Seta Kru** (Settra Kru) (4°54'N., 8°51'W.), a village, is situated 3.7 miles ESE of the entrance to the Plassa River. It contains a prominent house and a tree, 58m high, which is one of the most conspicuous objects along this stretch of coast. Another tree, 56m high, stands at the village of Little Kru, 1.5 miles NW of Seta Kru and is also plainly visible from seaward.

Good anchorage can be obtained, in depths of 14 to 18m, sand, about 1.3 miles SSW of Seta Kru; however, nearer the coast the bottom becomes rocky.

The coast between Seta Kru and the mouth of the Dehwah River, 7 miles ESE, continues low and sandy. A large village stands on Neatano Point, located 0.5 mile SE of the mouth of the Dehwah River.

Numerous shoals and sunken rocks front this coast. The outermost danger is formed by a steep-to submerged rock, which breaks, lying about 1 mile W of Neatano Point.

**12.22 King Willis Bay** (King Wills Bay) (4°49'N., 8°44'W.) is formed by a bend in the coast between the mouth of the Dehwah River and King Willis Point, 2 miles SE. Nana Kru (Great Nanna Kru), a small village, stands 1.5 miles ESE of the mouth of the river. The approaches to the bay and the bay itself are encumbered with numerous rocks and shoals.

King Willis Point (King Wills Point), formed by a rocky projection, 6m high, is marked by a clump of prominent palm trees. A prominent hill, 64m high to the tops of the trees, stands 2 miles N of the point.

Depths of less than 9m extend up to 0.8 mile W of the point and it is fronted by several rocks and reefs.

Thekla Bolen Rock, with a depth of 6.4m; Alert Rock, a 4.6m pinnacle; and Sperling Rock, a 2.3m pinnacle which occasionally breaks, lie in a group between 1.7 and 2.8 miles WSW of King Willis Point.

Wrey Rock, with a depth of 9.1m, and Boehmer Reef, with a depth of 6.4m, lie 1 mile W and 0.5 mile SW, respectively, of King Willis Point. Tinson Reefs, a narrow ridge with depths of 6 to 9m, and Herald Rock, a 7.8m pinnacle, lie 0.8 mile WSW and 0.7 mile NW, respectively, of Wrey Rock.

Cameroon Ledges, with a least depth of 3.2m, lies about 0.8 mile W of King Willis Point.

Anchorage can be obtained, in depths of 12 to 14m, sand with good holding ground, about 1 mile WSW of King Willis Point.

**12.23** The coast between King Willis Point and **Wappi Point** (4°46'N., 8°36'W.), 8.5 miles ESE, consists of sandy beaches which are fronted in places by rocky ledges. These beaches are also intersected by the mouths of several small rivers which are connected to inland lagoons. Several moderately-high hills stand 2 to 2.5 miles inland along this part of the coast.

Uro Point, the S entrance point of the West Uro River, is located 3.5 miles ESE of King Willis Point. Foul ground, which dries 0.6m at its extremity, lies within 1 mile W of this point.

Swallow Rocks, which are submerged and usually break, lie about 2 miles SW of Uro Point. A patch, with a depth of 8.2m, and another patch, with a depth of 7.8m, lie about 0.8 mile WSW and 0.7 mile ESE, respectively, of Swallow Rocks. A stranded wreck lies 1.5 miles SSW of Uro Point.

A bank, with a least depth of 12.8m, and a shoal, with a depth of 11m, lie about 3.5 and 4 miles SSE, respectively, of Uro Point.

Between Uro Point and the East Uro River, 3 miles ESE, reefs extend as far as 1 mile offshore. The mouth of the East Uro River is hidden from seaward by large granite boulders; the large village of Subono stands 1 mile W of its entrance. Vessels can obtain anchorage, in a depth of 18m, sand, about 1.7 miles S of this village.

A reef, which extends up to 1 mile WSW of Wappi Point, has numerous above-water rocks lying on it. One of which is 9m high and prominent. Flat Island, 5m high, lies on the outer part of a large area of foul ground, 1.3 miles S of Wappi Point,

A shoal, with a depth of 8.7m, and a patch, with a depth of 12.8m, lie about 1.3 miles SW and 1.2 miles SE, respectively, of Flat Island.

**Caution.**—Most of the rocks in this vicinity are pinnacles and soundings give no warning of their vicinity. In addition to the charted dangers, there may also be others and vessels navigating in this locality must use extreme caution.

**12.24 Baddu Point** (4°41'N., 8°28'W.) is located 9 miles ESE of Wappi Point. The coast between is low and sandy, with few distinguishing features and only occasional patches of rock. A heavy surf breaks along this part of the coast and there is only a few places where a landing can be made.

Rocks, up to 4m high, front a rocky point on which the village of Little Nifu stands, 1.5 miles ESE of Wappi Point. A chain of shallow shoals extends up to 1.5 miles S of this village.

**Great Nifu** (4°45'N., 8°32'W.), located 2 miles ESE of Little Nifu, is a large village which can be identified by two prominent white houses. Submerged rocks and foul ground, with depths of less than 11m, extend up to 1.5 mile S of the point lying close S of the village.

## The Dru River to Cestors Point

**12.25** The **Dru River** (4°43'N., 8°31'W.) is entered 2 miles ESE of Great Nifu. It is fronted by a bar, with a depth of 1.8m, and has depths up to 3.7m inside the entrance. Druta Rock, 6m high, is formed by a large and conspicuous block of stone and stands 1 mile W of the river entrance. Two shoal patches, with depths of less than 5m, lie about 0.5 mile S of this rock.

A reef extends up to 0.8 mile SW of Baddu Point. Several above-water rocks lie on this reef and Dead Islet, 11m high, is the largest.

**Kata Point** (4°40'N., 8°27'W.) is located 1.5 miles SE of Baddu Point. A conspicuous white house, with a red roof, stands on this point.

Baddu Shoals extend up to 2.3 miles W of Dead Islet and consist of several submerged heads which are marked by breakers. Vessels are warned to observe great caution when navigating within 3 miles of this stretch of the coast.

Monkey Rock, 2.7m high, lies 1.3 miles S of Kata Point and is conspicuous. Several shoals, with depths of 4 to 9m, lie between Baddu Shoals and Monkey Rock. A rock, which always breaks, and a patch, with a depth of 10m, lie about 0.3 mile and 2 miles W, respectively, of Monkey Rock.

Castle Rock, 10m high, lies on the outer end of the coastal reef, 2.5 miles E of Monkey Rock. It is conspicuous from seaward against the background of a sandy beach. A submerged rock lies about 0.6 mile W of this rock and several shoals, with depths of 5 to 9m, extend up to 1 mile W of it.

A prominent stranded wreck is reported to lie about 1 mile SSW of Castle Rock. A prominent radio mast is reported to stand along the shore, 2.5 miles NE of Monkey Rock. Anchorage can be obtained, in a depth of 21m, about 0.5 mile SSE of Monkey Rock.

**12.26** The coast between the E end of the coastal reef lying within Castle Rock and the entrance to Picniness Creek (Pickaninny Sesters River), 3.5 miles ESE, consists of a sandy

beach and can be safely approached. The latter river can be only entered by boats or canoes when the bar is smooth. The W entrance point is formed by a low sandy spit and the E entrance point, on which stands a small village, is bold and rocky.

**Subbubo Point** (4°36'N., 8°18'W.) is located 3.6 miles SE of Picnicess Creek. The coast between is indented by sandy bights and is bordered by rocks and boulders.

Picnicess (Pickaninny Sesters), a moderate-sized town, is situated 1.4 miles ESE of the entrance to the river; a conspicuous clump of trees stands in its NW part. Shoals, with depths of 3 to 9m, extend up to 1 mile SW of the town.

Several patches, with depths of 9m or less, lie within 1.8 miles of the coast between Castle Rock and Subbubo Point. In addition, several depths of less than 15m lie over 2 miles offshore.

Pashu Rock, 4m high, lies 1.5 miles S of the entrance to Picnicess Creek and is conspicuous. Several shoals, with depths of 9 to 13m, lie up to 1.5 miles W, 1 mile SW, and 1 mile SE of this rock.

Magrane Rocks, formed by two submerged heads, lie 1 mile SW of Subbubo Point. A patch, with a depth of 9.1m, lies about 0.6 mile SSE of these heads.

Numerous dangers lie N of the alignment of Pashu Rock and Subbubo Point.

Anchorage can be obtained, in a depth of 26m, about 1 mile SSE of Pashu Rock.

Between Subbubo Point and Cestors Point, 3 miles SE, the coast is formed by a low sandy beach which is backed by trees. Foul ground, with numerous shoals and rocks, extends up to 0.8 mile off this part of the coast.

## Cestors Point to Cape Palmas

**12.27 Cestors Point** (Sesters Point) (4°34'N., 8°15'W.) is formed by a small rocky projection. Sesters Hill, 64m high, stands close NE of the point. It is conspicuous and has a long and flat summit covered with trees.

Carpenter Rock, 5m high and steep-to, lies at the outer edge of the foul ground which extends up to 1 mile SSE of the point. This conspicuous rock is grey-colored and the sea always breaks heavily on it. Benin Rock, with a depth of 8.2m, lies about 0.5 mile SW of it.

Grand Cess (Grand Sesters), an extensive village, extends 1 mile ESE along the coast from the entrance to the Grand Cess River, 1.5 miles E of Cestors Point. The coast in the vicinity of this village is high and sandy. A store stands on the coast near the middle of the village and can be identified by its red roof.

Factory Islet, 7m high, lies 0.8 mile ESE of the entrance to the Grand Cess River. It lies off a rocky point and is the largest of a group of large rocks. A shoal, with a depth of 7.3m, was reported (1933) to lie about 0.7 mile SSW of this islet. A patch, with a depth of 6.9m, lies 0.5 mile S of the islet.

Vessels are advised to anchor, in depths of over 18m, as the bottom in this vicinity is rocky in many places of less depth. A convenient berth is in a depth of 22m, sand, about 1.2 miles SE of Carpenter Rock.

**12.28 Ranger Point** (4°33'N., 8°12'W.), located 2 miles E of Factory Islet, is formed by a conspicuous black, rocky point on either side of which lies a high sandy beach. A small village is

situated on this point and a conspicuous clump of trees, 51m high, stands 1 mile NE of it.

Between Ranger Point and the entrance to the Puleba River, 8 miles E, the coast is low, densely wooded, and bordered by a sandy beach which is clear of off-lying rocks. Several isolated clumps of trees, visible from seaward, stand a short distance inland from this part of the coast.

The **Puleba River** (4°02'N., 8°04'W.) is entered between low sand banks; its bar is seldom passable. The town of Wedabo (Wadebo) stands on both sides of the entrance to this river. Two conspicuous red and white houses are situated near the W end of the town.

Four small and rounded hills stand between 2.5 and 6 miles N of the entrance to the river; however, they are difficult to distinguish and are often hidden by mist, especially in the early morning. Farther inland, Niama Hill (Sugarloaf), 224m high, stands 15 miles N of the river entrance and is prominent.

Between the entrance to the Puleba River and Garawe Point, 7.5 miles ESE, the coast continues sandy and wooded. Inland from the coast, two conspicuous groves of trees stand 3 and 4 miles E of the river entrance.

The Poor River, located 4.5 miles E of the Puleba River, is accessible to boats and open only during the rainy season. Lindsay Rock, with a depth of 6.4m, lies 0.7 mile SSE of this river entrance. A stranded wreck lies about 0.5 mile ESE of Lindsay Rock.

Landing is possible in a surfboat, during moderate weather, on any part of the coast between Ranger Point and Garawe Point, except at the bar fronting the Puleba River.

Up to 3 miles offshore between Ranger Point and Garawe Point, a current has been observed to set SE with a velocity of about 0.7 knot. A weak countercurrent has occasionally been experienced. Nearer the land, the current is reported to be weak and irregular.

**12.29 Garawe Point** (Garaway Point) (4°30'N., 7°56'W.) is high and rocky with large rocks, up to 3m high, extending as far as 0.3 mile W of it. The town of Garawe (Garaway), mostly hidden by trees, is situated 0.5 mile NE of the point.

Solitary Rock lies 1.3 miles WSW of Garawe Point. It has a depth of 1.2m and always breaks. Tryh Rocks, formed by two groups of rocks up to 4m high, lies midway between Solitary Rock and the point. Long Patch, a narrow reef with rocks up to 6m high, is the continuation E of Tryh Rocks. Several shoals, with a depth of 6.9m at their outer end, extend up to 0.5 mile S of Long Patch; a patch, with a depth of 12.8m, lies about 2.3 miles farther SSW.

The Garawe River (Garaway River), entered immediately N of Garawe Point, is always accessible to canoes and to ordinary boats during moderate weather. The N side of the entrance is formed by a long, low sand spit on which a small village is situated. The best entrance channel leads between this spit and Fetiche Rock, a large above-water rock which lies near the middle of the entrance. Foul ground extends between this large rock and Garawe Point.

Vessels can anchor, in depths of 22 to 24m, sandy bottom, off almost any part of the coast between Ranger Point and Garawe Point. Anchorage can be taken, in a depth of 20m, about 2 miles SW of Garawe Point.

**12.30** The coast between Garawe Point and Fishtown Point, 8 miles SE, is low, sandy, and backed by trees. It is fronted by numerous off-lying shoals and vessels should give it a berth of at least 2.5 miles.

A shallow lagoon, lying close inland; a conspicuous clump of trees, 45m high to the tops of the trees, is located midway along this section of the coast.

Carl Woerman Rock, with a depth of 2.7m, lies about 1.8 miles SSE of Garawe Point. This rock was not observed to break during the dry season.

Dia Shoals, lying 3.5 miles farther ESE, consists of two rocky shoal areas which extend up to 2 miles offshore. Maxwell Rock, lying in the outer shoal area, always breaks.

**Fishtown Point** (4°25'N., 7°50'W.), 67m high, is formed of black rock. The village of Fishtown stands in the middle of a coconut plantation on the point. Two conspicuous cotton trees show above the plantation. A stranded wreck lies about 0.5 mile ESE of the point.

Fishtown Reef, with above-water rocks lying on it, extends up to 0.8 mile WSW of the point. Johnston Rock, with a depth of 3.7m, lies about 2 miles WNW of the point.

Cape Shoals, consisting of submerged rocks and above-water rocks up to 0.6m high, lies about 2.3 miles SW of Fishtown Point and is surrounded by foul ground. The sea breaks heavily on all these rocks; several detached shoal heads extend nearly 1 mile NNE of the main group. A stranded wreck is reported to lie on these shoals.

Etna Passage (Aetna Passage), which leads between Cape Shoals and Fishtown Reef, is 0.7 mile wide. A patch, with a depth of 9.6m, lies nearly in mid-channel at the E end of this passage.

**Outer Patch** (4°22'N., 7°55'W.), with a depth of 10.5m and steep-to, lies 6.5 miles WSW of Fishtown Point and is the outermost of dangers extending SW of the point. This patch is occasionally marked by a slight eddy.

Coley Rock, steep-to with a depth of 2.1m, lies 4.5 miles SW of Fishtown Point. A patch, with a depth of 7.3m, lies close WNW of this rock. Several rocky patches lie between Cape Shoals and Coley Rock. Finch Rock, with a depth of 5.5m, is the shallowest and a stranded wreck is reported to lie on it.

A rocky patch, with a depth of 11.9m, lies about 2.5 miles S of Fishtown Point.

Near Cape Shoals and Coley Rock, a current has been observed that usually sets E and SE with a velocity of 0.7 knot. Occasionally it sets W, but it is then uncertain in direction and weak.

Farther offshore, in depths of 45m or more, the current has been observed to set E and parallel to the coast, with a velocity of 1 knot.

**12.31** The coast and the interior land to the E of Fishtown Point become more broken and more readily identified. The general flatness of the land is relieved by several small hills.

Kabla Table Hill, which has a sparsely-wooded double summit, stands 3.5 miles ENE of Fishtown Point. It rises to a height of 94m and is conspicuous. When seen from the W, it is reported to have the appearance of a camel's hump. The other hills in this vicinity are not conspicuous and are often obscured by mist.

**Rocktown Point** (4°23'N., 7°47'W.), located 3 miles SE of Fishtown Point, is a black and rocky projection, 8m high. A

small sandy beach lies close N of it. The village of Rocktown stands in a coconut plantation, close N of the point. A conspicuous cotton tree rises above the coconut palms in the plantation.

A patch, with a depth of 5m, lies 0.5 mile offshore, midway between Fishtown Point and Rocktown Point.

Rocktown Reef, with above-water and submerged rocks, extends up to 0.8 mile SW of Rocktown Point. The outer rock on this reef is 0.6m high and many of them break.

Billy Rocks, formed by a chain of rocky heads, lies 0.7 mile S of Rocktown Point. The W of these heads has a least depth of 5m. Two shallow shoal heads, which always break, lie within 1 mile E of Billy Rocks. A patch, with a depth of 12.8m, lies about 2 miles S of Rocktown Point.

Anchorage can be obtained, in a depth of 20m, sand, about 1.2 miles SSW of Rocktown Point. Much of the bottom in this vicinity is rocky and care is necessary when anchoring.

**12.32 Cape Palmas** (Harper Point) (4°22'N., 7°44'W.) (World Port Index No. 45955), located 3.5 miles ESE of Rocktown Point, is formed by a rocky peninsula, 19m high. It is connected to the mainland by a low and sandy isthmus. The town of Harper stands on the peninsula and the isthmus and the town of Grand Town stands close E of it.

In the immediate vicinity of the cape, the land is low and marshy. Shepherds Lake, a narrow salt water lagoon, extends several miles in an E direction from close E of Grand Town. The Hoffman River enters the sea close N of the cape.

Russwurm Island, 8m high and rocky, is joined to the S side of the cape by a causeway and is difficult to distinguish. A rock lies at the seaward extremity of the foul ground which extends from the E end of the island. This rock is 4m high and the sea breaks heavily on it.

**Winds—Weather.**—During the rainy season, from May through September, loading and unloading operations are very hazardous as 1.8 to 3m high swells plague the port and the surrounding coast. Extreme waves make the port completely unusable for at least 4 days per month. During the dry season, the seas normally have swells ranging from 0.9 to 1.5m.

The period from June to October corresponds to the Antarctic winter and is the time of most severe wave conditions. These wind generated waves approach the port predominantly from the S and SW.

**Tides—Currents.**—Tides rise 1.4m at springs and 1.2m at neaps.

At times, the current sets strongly along the coast just outside the anchorage. It usually sets E, but occasionally W and may attain a rate of 1 knot.

**Depths—Limitations.**—The port consists of an open roadstead anchorage for ocean-going vessels and a jetty for the use of coasters.

A breakwater extends WNW from the NW end of Russwurm Island and a jetty extends parallel to and close E of it. This jetty has a berth, 55m long, which has a depth of 6.4m alongside at HW and a depth of 4.8m at LW. Coasters of up to about 2,000 dwt can be handled at the jetty and vessels up to 6,000 dwt can anchor in the roadstead.

Timber, in the form of log rafts, and cargo in lighters are towed out to larger vessels at the anchorage.

The Hoffman River has an entrance, less than 100m wide, which is encumbered by several drying rocks. The bar fronting the mouth of the river has least depth of 0.7m.

**Aspect.**—A main light (Cape Palmas) is shown from a tower, 22m high, standing near the W extremity of the cape. The light tower and several buildings standing in the vicinity of the cape are conspicuous.

A conspicuous water tower, marked by lights, stands 1.2 miles ENE of the cape. A conspicuous summit, 70m high, stands 3.5 miles ENE of the cape. It is surmounted by Cuddington College, a large and conspicuous building with a black roof.

Congo Rock lies about 1.2 miles W of the cape. It has a depth of 5m and seldom breaks. An obstruction was reported (1983) to lie about 0.5 mile NNE of this rock.

Recorder Rock, with a depth of 8.7m, lies 1.3 miles WSW of the cape and is the outermost danger. A buoy is reported to be moored close S of this rock. Henderson Rock, a 7.3m patch, and Bull Rock, a 9.1m patch, lie 300m NNE and 0.3 mile NE, respectively, of Recorder Rock.

Outer Rock, with a least depth of 2.7m, lies near the outer end of a chain of rocks which extend up to 0.6 mile WSW of the cape. Cape Rock, lying in the middle of this chain, dries 1.2m and always breaks. Yoruba Rock, with a least depth of 5.9m, lies about 0.5 mile W of the cape.

Brenton Rock, with a depth of 5m, is the outermost of several rocky shoals which extend up to 0.4 mile WSW of

Russwurm Island. A buoy is reported to be moored close S of this rock.

**Pilotage.**—Pilots are not available.

**Anchorage.**—Vessels can anchor, in a depth of 11m, sand, between 0.3 and 0.6 mile WNW of Cape Palmas Light. Small vessels can find some shelter from the swell in a depth of 7m, sand, between 0.3 and 0.4 mile NW of the light. The holding ground is good and vessels generally lie heading into the swell.

Anchorage can also be obtained, in a depth of 16m, about 0.5 mile S of the cape.

**Directions.**—Vessels approaching from the W should keep in depths of over 25m before heading NE towards the anchorage. From a position lying about 0.2 mile W of Henderson Rock, a NE course may be shaped, taking care to pass NW of Bull Rock and Recorder Rock.

Vessels approaching from the E should give Newill Rock and Brenton Rock a berth of at least 0.5 mile and should not attempt to pass between the cape and Brenton Rock, Outer Rock, or Yoruba Rock.

**Caution.**—A vessel reported (1987) grounding in an attempt to pass between Russwurm Island and Three Foot Rock. A dangerous obstruction has been charted in the area where the vessel reported having incurred extensive hull damage. A stranded wreck lies close W of this position.